Performance Measurement at OIT

Draft

Software Engineering Institute Carnegie Mellon University Pittsburgh, PA 15213

Mark Kasunic June, 2014

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Module Topics

The goal of performance management

What is a "performance measure"?

What do we measure?

Step through of review comments



Motivation

Accountability for performance has become increasingly critical.

- It is necessary for VA to understand the key drivers behind its performance and demonstrate the value of its work.
- Results provide information on how VA's current programs and activities are working and how resources can be allocated to optimize effectiveness.
- Focus on the use of *data* is a key principle guiding any performance management system.



But First You Need to Determine Where You Are

In the absence of measurement, we are like a traveler without a map ... wandering, directionless, and confused.



Measurement helps us establish where we are, whether we've made progress, what has changed, and where we need to go.



You Can't Manage What You Can't Measure

Performance management

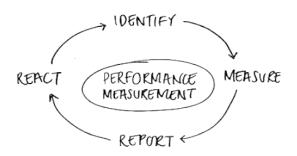
A forward-looking process used to set goals and regularly check progress toward achieving those goals.

Performance measurement

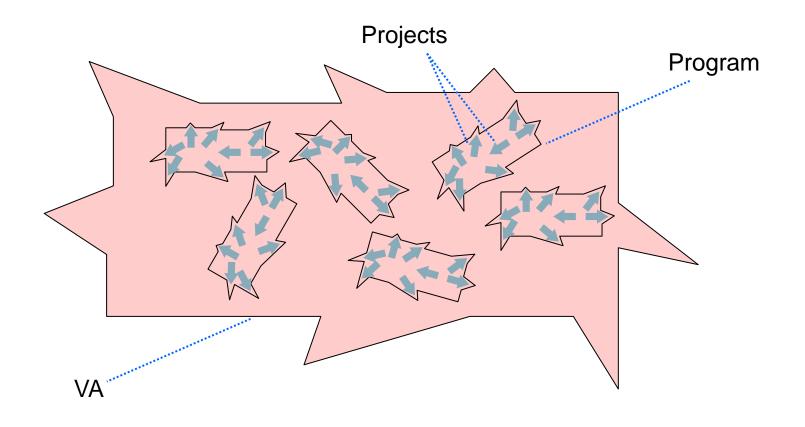
A process by which an organization monitors important aspects of its programs, systems, and processes.

Performance measure

The quantitative measure that is designed to track progress towards achieving a goal.



Without Performance Management

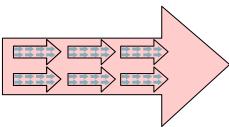


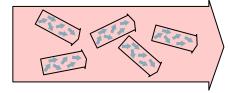
Building Alignment and Synergy

Performance management strives to align all the VA's subsystems to achieve results.

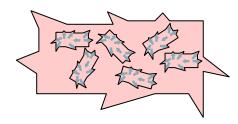
- Divisions
- Processes
- Teams
- Individuals







Transitioning to Performance Management



Without Performance Management

Cascading and Linked Goals



OIA Goals

3

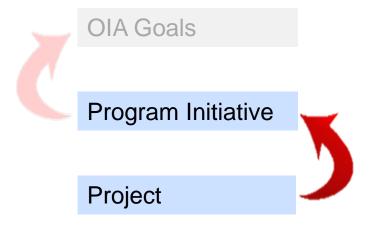
Program Initiative

Project

Project Activities

Each Program Initiative maps to at least one of the OIA goals.

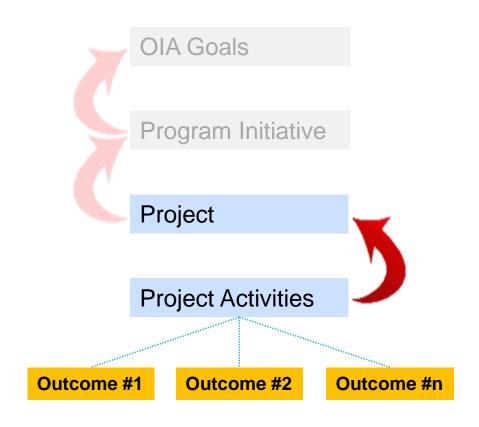
Accomplishing a Program Initiative supports the achievement of an OIA goal(s).



A Program establishes a *Project* to address the intent of the Program's Initiative.

If the project is successful, then the intent of the initiative is met.

If the intent of the initiative is met, then progress is made in achieving the OIA goal that the initiative is mapped to.



It is at the project level when work is actually accomplished.

A project is composed of activities.

Activities have outcome(s).

Outcomes are what we measure.

We also measure progress towards achieving the outcome.

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What do we measure?

Step through of review comments



Two Types of Measures

Quantitative



Qualitative



Quantitative Performance Measures

A quantitative performance measure is composed of

- a number
- · a unit of scale

The *number* provides the magnitude (how much)

The *unit of scale* gives the number a meaning (what).

In some cases, multi-dimensional units of measure are used.

- Expressed as ratios.
- Examples: Number of accidents per year; # of certifications awarded per # of individuals trained.

Clarifying Some Terminology

Term	Explanation
Activity	A description of the task that produces the intended outcome.
Outcome	The objective of the activity; a product or service.
Performance measure	Quantitative: A number that portrays a key characteristic of the outcome. Qualitative: The assignment of a categorical variable that characterizes a key attribute of the outcome.

Clarifying Some Terminology

Activity	A description of the task that produces the intended outcome.	
Outcome	The objective of the activity; a product or service.	
Performance measure	Quantitative: A number that portrays a key characteristic of the outcome.	
	Qualitative: The assignment of a categorical variable that portrays a key characteristic of the outcome.	
Target	A specific value of the performance measure that is to be achieved by a specific calendar date. In the VA's spreadsheet, this is referred to as "Fully Successful."	

Qualitative Performance Measures

Qualitative measures are also referred to as categorical data.

Qualitative indicators are viewed as subjective that are filtered through perceptions. They can therefore be imprecise when compared to quantitative measures.

Document development

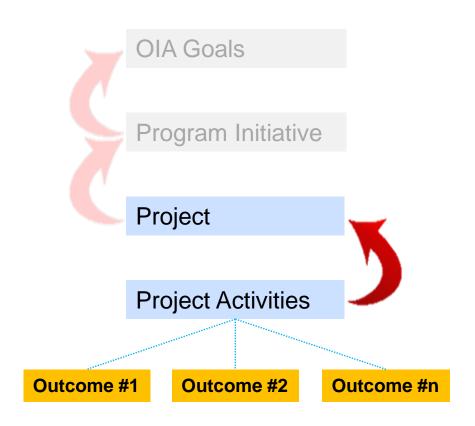
- Plan completed
- Research completed
- Draft complete
- Draft peer-reviewed
- Completed/Approved

New Technology Introduction

- Requirements defined
- Design completed
- Prototype developed
- Testing completed
- Rollout completed

Customer Satisfaction

- Excellent
- Very good
- Good
- Satisfactory
- Poor
- Very poor
- Unacceptable



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What Do We Measure?





Quality of outcome



Progress towards achieving outcome

What Do We Mean By "Quality"?

In technical usage, quality can have two meanings:



the characteristics of a product or service that bear on its ability to satisfy stated or implied needs (According to Philip Crosby, quality means "conformance to requirements.")



a product or service free of deficiencies (According to Joseph Juran, quality means "fitness for use.")

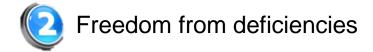


Source: The American Society for Quality; Quality Glossary; http://asq.org/glossary/q.html

Comparing the Definitions of Quality



Features that meet or exceed customer needs



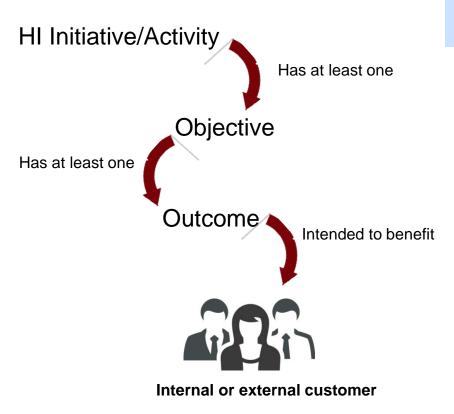
Higher quality enables an organization to:

- increase customer satisfaction
- meet or exceed competition
- increase market share
- secure premium prices

Higher quality enables an organization to:

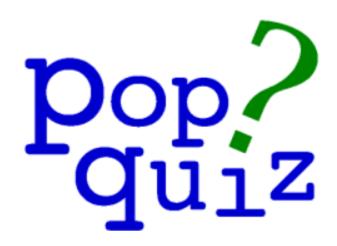
- reduce rework and waste
- reduce field failures
- reduce customer dissatisfaction
- reduce pilot testing time
- shorten time to put new products on market
- increase capacity
- improve delivery performance





The best performance measures evaluate the impact of the outcome of the activity on the customer.

Evaluate impact from the customer's perspective!



A staff person in your division has been tasked to develop a training course to teach veterans how to log onto an HI service.

Which of the following performance measures is the best ... and why?

- 1. The number of pages of materials prepared for the training course.
- The number of students that have registered for the training.
- 3. Course evaluations the percentage of training course attendees that rated the course as "satisfactory" or "excellent."
- 4. The percentage of veterans that were able to log on to the HI service without help from the call center (after receiving the training).
- Post-course survey results of veterans that took the training.

Key to a Good a Outcome-Based Performance Measure

- Be careful to distinguish an activity from the outcome of the activity. Performing a task or a series of tasks is not an outcome!
- Don't write the performance measure from your perspective. Write it from the customer's perspective.
- Ask yourself what impact did the outcome (product or service) have on the user of the service.
- Check and validate that the performance measure provides insight into whether you are addressing the OIA goal that the activity is mapped to.

What Do We Measure?





Quality of outcome



Progress towards achieving outcome

Why Measure Progress?

Measuring the results of your commitment allows you to look forward and effectively plan next steps.

Measuring schedule performance also provides an early warning indicator that alerts you if the project is slipping.

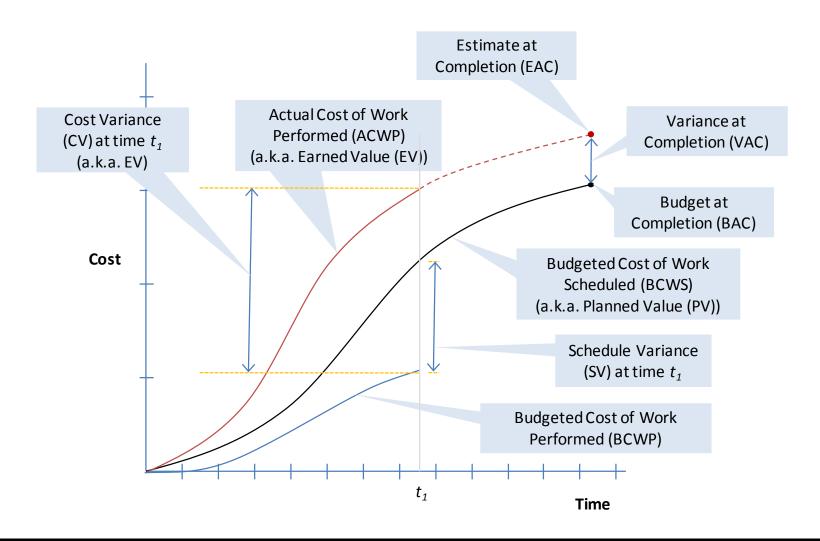
Understanding schedule progress allows you to take corrective actions (a recovery plan) so that you meet your commitment.

Schedule performance can be measured using:

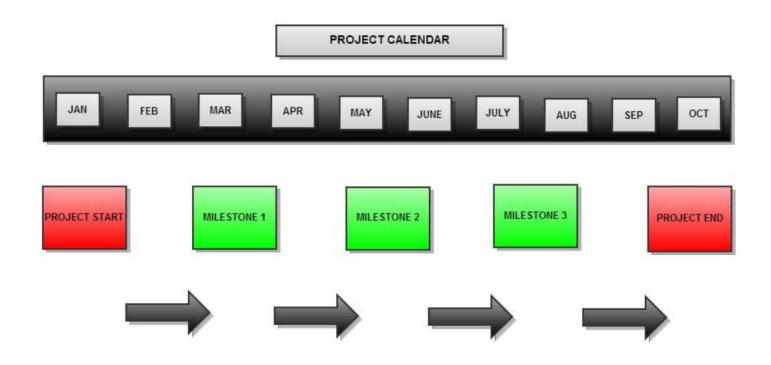
- a quantitative measure or
- a qualitative measure



Quantitative Example: Earned Value



Qualitative Example: Milestones Completed



Example: Schedule-Based Qualitative Performance Measure

New Technology Introduction

- Requirements defined
- Design completed
- Prototype developed
- Testing completed
- Rollout completed

Target Milestone Date

Oct. 22, 2014

Nov. 30, 2014

March 1, 2015

April 1, 2015

August 15, 2015

Used to track progress

Fully Successful criterion

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Expressed "outcome" as something that developers "do."

What is the outcome of the execution of the processes? What is the benefit that will be realized? How will you measure the benefit?

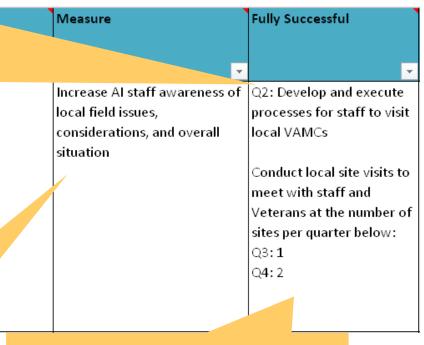
How will you know if you have been successful?

Completed by beginning of Q2? Or by the end of Q2?

Expressed as an "activity" but not as a measure.

An "activity" column should be added.

Activity description uses vague. This makes identifying a valid performance measure difficult.



Expressed as an "activity."

What is the impact of the site visits?

How will you know if you have been successful?

The "hoped-for" outcome of the activity is to increase awareness. So, this is the attribute that should likely be measured.

What specifically is the product or service? Is the process a "document?"

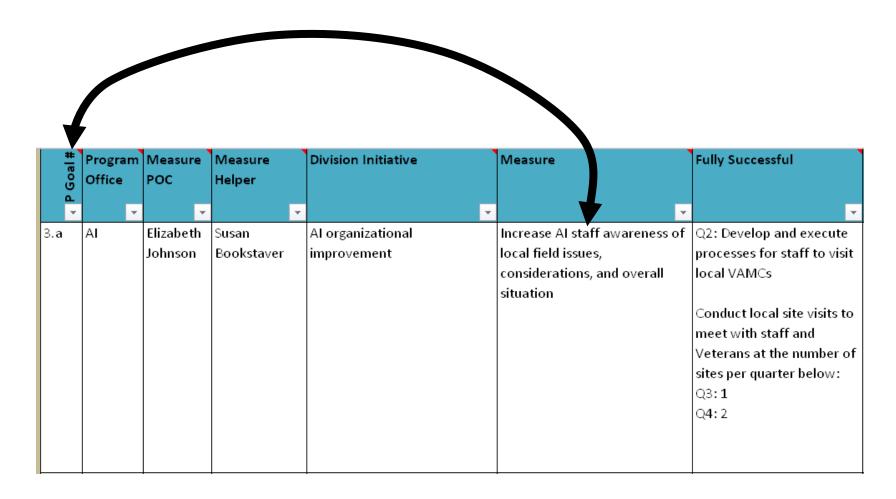
I infer that the intention is to design and document a process that when performed will lead to increased staff awareness.

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3. a	ΑI	Elizabeth Johnson		Thes	Al organizational improvement see are related to schedu	Increase AI staff local field issues, considerations, a situation		processe local VAM Conduct meet wit Veterans	s for staff to visit

Remake

Activity	Performance measure	Target (a.k.a. "Fully Successful)
Document and deploy a process that will lead to increased staff awareness of local field issues.	Schedule: "Process Status (PS)" with categorical variables: Draft completed Draft peer-reviewed Process doc completed/approved	 Draft completed by 10-15-2014 Draft peer-reviewed" by 11-05-2014 Process doc completed/approved by 12-08-2014
	Schedule: # of sites where process was deployed	1 (by end of Q2) 2 (by end of Q3)
	Quality/Impact: # of staff responses of category "increased" or "significantly increased" to a survey question asking whether their awareness as increased	90% respond "increased" or "significantly increased"

Is the Mapping Valid?



Checking Validity

OIT Objective:

3.b Contracting - Improve OIA's ability to obtain contracted resources, by championing changes to the current process and leveraging innovative contracting options external to the agency.



Does the program activity help OIT meet this objective?

Program activity:

Increase AI staff awareness of local field issues, considerations, and overall situation

"Accomplishing" is an activity. It is not a measure. What will you measure to understand

- the degree of VHA office integration
- the clarity of roles and responsibilities

ity of rolog and rooperiolomic	3 Wedsure	Tully Successiul
Execute a plan to Integrate all	Accomplish Integration Plan	Plan components
key VHA offices into VE with	activities	implemented
clear roles and responsibilities.		

The outcomes of this activity are:

- 1. Integrated VHA offices
- Development of clear roles and responsibilities

So, these are the things that should be measured.

But how will "success" be measured? What if all the plan components are implemented, but the VHA offices remain unintegrated?

When will the integration be accomplished?

Fully Successful

Example Remake

Activity	Performance measure	Target (a.k.a. "Fully Successful)
Integrate key VHA offices into VE with clear roles and responsibilities	Schedule: "Roles/Responsibilites doc status)" with categorical variables: Doc drafted Roles/responsibilities doc completed and approved	 Draft completed by 10-15-2014 Draft peer-reviewed" by 11-05-2014 Roles/responsibilities doc completed/approved by 12-08-2014
	Schedule [How will the progress towards integration be measured? What the key milestones?]	# of VHA offices integrated into VE by date?
	Quality/Impact: # of staff responses of category "clear" or "very clear" to a survey question asking about the clarity of the roles and responsibilities	90% respond "clear" or "very clear"

The activity is unclear. I infer that this development of a training course? However, the "Fully Successful" criterion indicates that the training is delivered. Is the activity to develop and conduct? Or just to conduct?

Activity	Success Measure	Fully Successful
Complete MyVeHU training for	A training session	Conduct one training session
JLV 2.2		by end of Q1

This is not expressed as a measure.

This is a schedule-based performance measure.

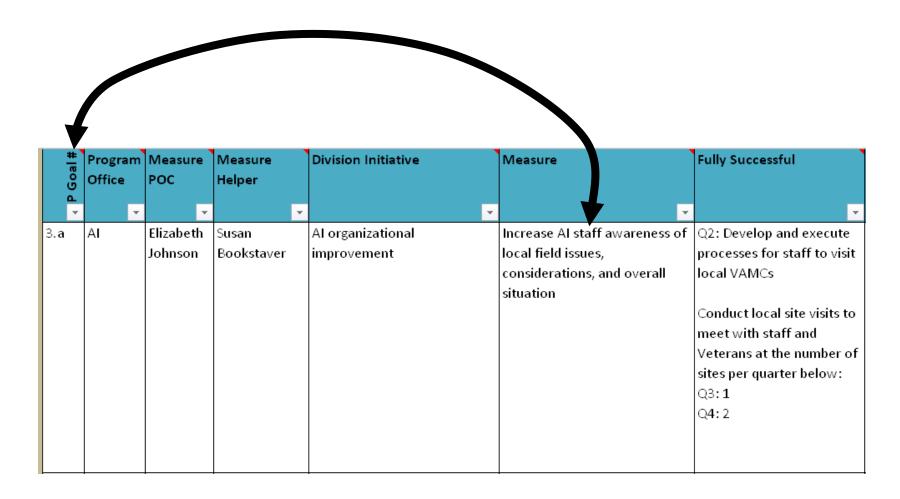
How will you assess the quality of the delivered training? Did the training have the intended impact?

Example Remake

Activity	Performance measure	Target (a.k.a. "Fully Successful)
Deliver the MyVeHU training course for JLV 2.2	# of students that successfully meet the objectives of the course (assumes summative evaluation)	90% of registered students meet the course objectives
	# student course ratings of "effective" or "very effective"	90% of students rate the course as "effective" or "very effective"

Note: If course development is involved, then schedule-based performance measures should be developed.

Is the Mapping Valid?



Checking Validity

OIT Objective:

3.b Contracting - Improve OIA's ability to obtain contracted resources, by championing changes to the current process and leveraging innovative contracting options external to the agency.



Does the program activity help OIT meet this objective?

Program activity:

Increase AI staff awareness of local field issues, considerations, and overall situation

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